

Applicant: David J. Domingues
Application S/N: 09/945,204
Filed: 08/31/2001
Title: CHEMICALLY LEAVENED DOUGHS AND RELATED METHODS

Examiner: Tran Lien, Thuy

Office Action Mail Date: 11/27/2006
Group Art: 1761
Docket No: PIL0060/US

Claim Amendments

Please amend claims 1, 3, 6, 8, 10-13, 15-16, 20, 22-23, 25-26, 36, 43, and 59. Cancel claims 2, 4, 5, 7, 9, 14, 17-19, 21, 24, 27-35, 37-42, and 44-58. Add new claims 60-67 as follows:

1. (currently amended) A refrigerated packaged dough product dough composition comprising a low pressure container having therein at least two individual portions of a chemically leavened dough product, wherein each portion comprises an encapsulated basic active ingredient, a non-encapsulated acidic active ingredient, and a barrier material, wherein

at below baking temperature the barrier material encapsulates the basic active ingredient and separates the basic active ingredient from the non-encapsulated acidic active ingredient to inhibit reaction of basic active ingredient and acidic active ingredient,

the encapsulated basic active ingredient has an activity in the range from about 55 percent to about 70 percent;

the non-encapsulated acidic active ingredient is selected to have relatively low solubility in the dough composition below baking temperature and to be substantially soluble in the bulk dough composition during baking,

the barrier material degrades at or above the baking temperature to allow the basic active ingredient and the acidic active ingredient to come into contact in the dough composition and react to substantially leaven the dough composition during baking, and

the dough composition when stored at refrigerator conditions for a time period of at least 12 weeks, is capable of exhibiting the following properties:

the dough composition experiences less than 35 percent expansion during a time period beginning upon completion of the dough composition preparation and continuing through packaging and refrigerated storage, and

the dough composition has a raw specific volume from about 0.9 to about 1.3 cubic centimeters per gram, and when baked, has a baked specific volume of at least about 2.5 cubic centimeters per gram.

2. (canceled)

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3. (currently amended) The packaged dough product composition of claim 1 wherein the dough composition contains from about 0.25 to about 2 wt% basic active ingredient encapsulated in the barrier material, and an amount of acidic active ingredient to neutralize the encapsulated basic active ingredient.

4. (cancelled)

5. (cancelled)

6. (currently amended) The packaged dough product composition of claim 1 wherein the acidic active ingredient has a solubility of greater than 35 kcal/mole.

7. (cancelled)

8. (currently amended) The packaged dough product composition of claim 1 wherein the acidic active ingredient is sodium aluminum phosphate.

9. (cancelled)

10. (currently amended) The packaged dough product composition of claim 1 wherein the basic active ingredient is soluble in a water phase of the dough composition at one or more of a processing or refrigeration storage temperature.

11. (currently amended) The packaged dough product composition of claim 1 wherein the basic active ingredient is chosen from the group consisting of sodium bicarbonate, potassium bicarbonate, ammonium bicarbonate, and combinations thereof.

12. (currently amended) The packaged dough product composition of claim 1 wherein the barrier material has a melting temperature of at least 90°F.

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13. (currently amended) The packaged dough product ~~composition~~ of claim 12 wherein the barrier material comprises a fat-type barrier material selected from the group consisting of palm oil, palm kernel oil, canola oil, a synthetic analog of palm kernel oil or canola oil, and combinations thereof.

14. (canceled)

15. (currently amended) The packaged dough product ~~composition~~ of claim 1 wherein the encapsulated particles have an average size in the range from about 100 to about 420 microns.

16. (currently amended) The packaged dough product ~~composition~~ of claim 1 wherein the basic active ingredient is sodium bicarbonate.

17-19. (cancelled)

20. (currently amended) The packaged dough product ~~dough composition~~ of claim 1 comprising encapsulated particles comprising basic active ingredient particulates coated by barrier material, and further comprising encapsulated particles comprising acidic active ingredient particulates coated by barrier material.

21. (canceled)

22. (currently amended) The packaged dough product ~~composition~~ of claim 20 wherein the barrier materials are the same or different, and each independently has a melting point in the range from about 90°F to about 160°F.

23. (currently amended) The packaged dough product ~~composition~~ of claim 20 wherein the barrier materials are the same or different and independently comprise a vegetable oil chosen from the group consisting of palm kernel oil, canola oil, a synthetic analog of palm oil, palm kernel oil or canola oil, and combinations thereof.

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24. (cancelled)

25. (currently amended) The packaged dough product ~~dough composition~~ of claim 20 wherein the acidic active ingredient is selected from the group consisting of sodium aluminum phosphate, sodium aluminum sulfate, sodium acid pyrophosphate, monosodium phosphate, monocalcium phosphate monohydrate, anhydrous monocalcium phosphate, dicalcium phosphate dihydrate, and mixtures thereof.

26. (currently amended) The packaged dough product ~~dough composition~~ of claim 20 wherein the acidic active ingredient is selected from the group consisting of sodium aluminum phosphate, sodium acid pyrophosphate, and mixtures thereof.

27-35. (cancelled)

36. (currently amended) The packaged dough product ~~composition~~ of claim 1 wherein
the basic active ingredient is encapsulated by a barrier material having a solid
fat index of at least about 50% at 75°F,
the acidic active ingredient is not encapsulated.

37-42. (cancelled)

43. (currently amended) The packaged dough product ~~composition~~ of claim 1, wherein the dough composition is refrigeration stable such that no more than 0.46 cubic centimeters per gram of carbon dioxide is released from the dough composition over a twelve week period of storage at about 45°F.

44-58. (cancelled)

59. (currently amended) The packaged dough product ~~composition~~ of claim 1, wherein the encapsulated basic active ingredient has an activity in the range from about 60 percent to about 70 percent.

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60. (new) The packaged dough product of claim 1 wherein the non-pressurized container comprises a pouch or cup.

61. (new) The packaged dough product of claim 1 wherein the dough composition has a raw specific volume in the range from about 1.0 to about 1.6 cubic centimeters per gram, and the dough composition can be baked to a specific volume of at least about 2.0 cubic centimeters per gram.

62. (new) The packaged dough product of claim 1 wherein the encapsulated basic active ingredient has an activity in the range from about 55 percent to about 70 percent.

63. (new) The packaged dough product of claim 1 wherein the dough composition, when stored at refrigerator conditions for a time-period of at least 12 weeks, experiences less than 35 percent expansion during a time period beginning upon completion of the dough composition preparation and continuing through packaging and refrigerated storage.

64. (new) The packaged dough product of claim 1 wherein the container is non-presurized.

65. (new) The packaged dough product of claim 1 having no pressure release upon opening.

66. (new) The packaged dough product of claim 1 further comprising an outer non-pressurized package.

67. (new) The packaged dough product of claim 60 wherein the non-pressurized container comprises at least one cup.